SNOWPLOW INDEX

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SNOWPLOW
REQUIRED & RECOMMENDED EQUIPMENT
F-150

MINIMUM REQUIRED EQUIPMENT - SNOW PLOW PREP PACKAGE (68P)

NOTE: The engine Outside Air Temperature (OAT) sensor is now located in the driver's side mirror.

- 4x4 only
- Requires 5.0L VB engine (995)
- XL trim (only) - requires Rear-window, Fixed Privacy Glass with Defroster (924/57Q)
- XLT 300A Base - requires Rear-window Defroster (57Q)
- Lariat trim (only) - Electronic Shift-On-The-Fly (ESOF) replaces standard 2-speed automatic 4WD
- Lariat Technology Package not available with Snowplow Prep Package (68P)
- Available on Regular Cab, Super Cab and Super Crew models (5.5', 6.5' and 8.0' boxes)
- Available with XL, XLT and Lariat Trim
- Both regular and heavy-duty payload packages
- 'Snowplow Mode" when activated by either the button on the instrument panel or in the Sync feature screen will disable (load shed) the following features to maintain required electrical charge margins during plow operation/use----400-Watt Inverter Outlet, Fog Lamps, Heated/Cooled front/rear seats.
- Snowplow mode button also activates relay to snowplow controls

WARRANTY

NOTE: The F-150, snowplow installation is intended for *Residential / Personal use only.*

The Ford New Vehicle Limited Warranty applies to vehicles with snowplows installed in accordance with these guidelines. Consult your Ford dealer or the Owner Guide for any further questions.

COMPLETED VEHICLE WEIGHT

Recommended plow assembly and aft-of-rear axle ballast weight limits are shown in the attached chart. These snowplow weight limits are based upon a vehicle built with noted trim levels with no additional Ford option content, a total of 300 lb. for a driver plus one front seat passenger (150 lbs. each), ballast weight rearward of the rear axle, and additional assumptions for commercially available snowplow assembly weights and mounting location.
The vehicle must not be operated when over-loaded. A vehicle is over-loaded when the weight of the completed vehicle with aftermarket equipment installed, plus driver, passengers, and cargo, exceeds either the FGAWR, RGAWR, or GVWR established by Ford Motor Company and displayed on the Safety Compliance Certification Label.

The addition of ballast weight placed rearward of the rear axle is required to prevent exceeding FGAWR, and to provide good vehicle braking and handling. The ballast should be attached securely to the vehicle with consideration for the normal driving dynamics of snowplowing, and occupant safety in accidents .

TOTAL ACCESSORY RESERVE CAPACITY

For Ford completed vehicles of 10,000 GVWR or less, the weight of permanently attached aftermarket equipment must not exceed the Total Accessory Reserve Capacity (T.A.R.C.) displayed on the Safety Compliance Certification Label to maintain the compliance representation that came with the Ford-built vehicle. Exceeding T.A.R.C. will require re-certification. This applies only to the permanently attached equipment, such as the snowplow frame mounting hardware, and not to the removable portion of the snowplow blade assembly.

FRONT END WHEEL ALIGNMENT AND HEADLIGHT AIM

Front end wheel alignment (toe) and headlight aim may require readjustment after installation of snowplow equipment. Failure to reset front wheel alignment may cause premature uneven tire wear. If required, reset to chassis manufacturer's specifications found in the Ford Shop Manual

ELECTRICAL CONNECTIONS

Installation of any inductive load devices such as electric motors, or electric clutches for clutch pumps, must not be connected to Ford vehicle wiring or fuse panels. Power for such devices should be taken directly from the battery or starter motor relay power terminal. Control of these devices should be achieved via relays. No direct current path should exist between Ford vehicle wiring and the installed load that is not filtered by the battery. These recommendations are intended to eliminate or minimize any induced reverse voltage into the Ford circuitry. Refer to SVE Bulletin Q-277 "Under Hood Electrical Equipment Mounting" for clearance guidance applicable to the F-150 and Super Duty series vehicles.

WARNING: The 2023 F-150 charge state is determined by a Battery Management Sensor on the negative battery lead. All Negative current must pass thru this sensor-failure to do so will result in malfunction of the vehicle charging system and shortened battery life. Do not make direct to battery connections at the negative battery post. See SVE Bulletin Q-231 for additional guidance.

Vehicles equipped with a Snowplow prep option will include a Snowplow mode switch located either on the dash or the Sync feature screen that will activate a 20-amp B+ power to a dedicated feed for the snowplow controller- It is a blunt cut White wire found taped to the left side of the drivers side dash panel. When activated the vehicle will enter a special load shedding strategy to ensure continuous operation of the snowplow during periods of high electrical demand.
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WEIGHT TABLE SHOWN ON NEXT PAGE

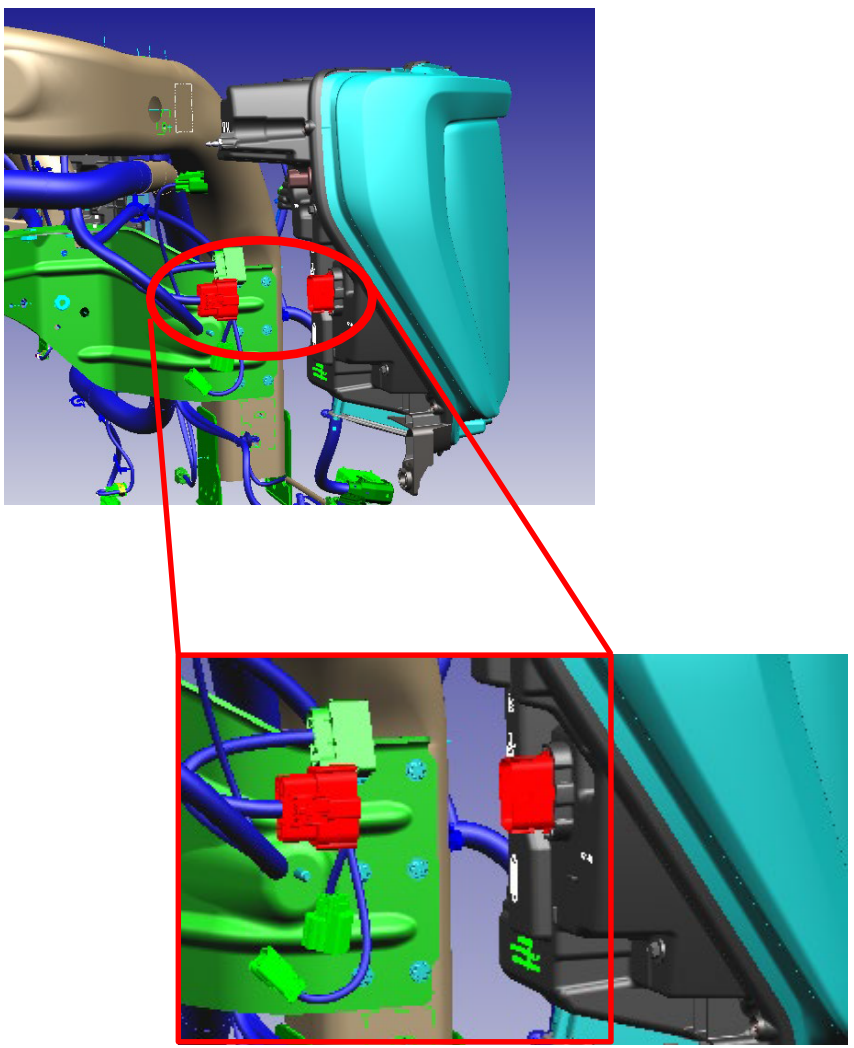
Ford PRO™ *Body Builders Layout Book*

SNOWPLOW
REQUIRED & RECOMMENDED EQUIPMENT
F-150

	Vehicle Description	Engine	Wheelbase (in)	GVWR (lbs)	FGAWR (lbs)	RGAWR (lbs)	Trim	Trim Level	Base Curb Weight (lbs) Front	Base Curb Weight (lbs) Total	Mounting Hardware Weight (lb)	**Plow Blade Weight Capability @ FGAWR (lbs) Total**	Ballast Total
Standard Payload	4x4 R/Cab	5.0L	122.4	6400	3150	3800	XL	lightest	2775	4574	70	**293**	1200
				6400	3150	3800		heaviest	2795	4616	70	**230**	900
				6400	3150	3800	XLT	lightest	2795	4614	70	**280**	1200
				6400	3150	3800		heaviest	2804	4645	70	**224**	900
	4x4 R/Cab	5.0L	141.1	6950	3300	4150	XL	lightest	2893	4660	70	**289**	1200
				6950	3300	4150		heaviest	2922	4731	70	**269**	1200
				6950	3300	4150	XLT	lightest	2913	4700	70	**275**	1200
				6950	3300	4150		heaviest	2924	4731	70	**267**	1200
	4x4 S/Cab	5.0L	145.0	7050	3450	3800	XL	lightest	2935	4820	70	**361**	1200
				7050	3450	3800		heaviest	2964	4871	70	**318**	1050
				7050	3450	3800	XLT	lightest	2961	4866	70	**342**	1200
				7050	3525	3800		heaviest	3030	5016	70	**303**	900
				7050	3525	3800	Lariat	lightest	3025	5007	70	**350**	1200
				7050	3525	3800		heaviest	3039	5040	70	**304**	950
	4x4 S/Cab	5.0L	163.7	7150	3525	4150	XL	lightest	2935	4951	70	**386**	1100
				7150	3600	4150		heaviest	2964	5002	70	**372**	750
				7150	3600	4150	XLT	lightest	2961	4997	70	**435**	1200
				7150	3600	4150		heaviest	2975	5030	70	**350**	650
				7150	3600	4150	Lariat	lightest	3030	5136	70	**371**	1100
				7150	3750	4150		heaviest	3036	5174	70	**415**	650
	4x4 Crew	5.0L	145.0	7050	3450	4150	XL	lightest	2976	4912	70	**332**	1200
				7050	3450	4150		heaviest	2998	4945	70	**279**	950
				7050	3450	4150	XLT	lightest	2996	4943	70	**317**	1200
				7050	3525	4150		heaviest	3066	5095	70	**262**	800
				7050	3525	4150	Lariat	lightest	3062	5088	70	**324**	1200
				7050	3525	4150		heaviest	3075	5128	70	**248**	750
	4x4 Crew	5.0L	156.8	7150	3600	4150	XL	lightest	3098	5014	70	**340**	1200
				7150	3600	4150		heaviest	3120	5054	70	**275**	850
				7150	3600	4150	XLT	lightest	3118	5049	70	**326**	1200
				7150	3750	4150		heaviest	3188	5204	70	**320**	750
				7150	3750	4150	Lariat	lightest	3184	5195	70	**387**	1200
				7150	3750	4150		heaviest	3199	5237	70	**312**	750
Heavy Payload (HPP)	4x4 R/Cab HPP	5.0L	141.1	7850	3400	4800	XL	lightest	2901	4807	70	**354**	1200
				7850	3400	4800		heaviest	2945	4944	70	**323**	1200
				7850	3400	4800	XLT	lightest	2956	4961	70	**315**	1200
				7850	3400	4800		heaviest	2967	4979	70	**307**	1200
	4x4 S/Cab HPP	5.0L	163.7	7850	3750	4800	XL	lightest	2981	5092	70	**531**	1200
				7850	3750	4800		heaviest	3018	5288	70	**503**	1200
				7850	3750	4800	XLT	lightest	3027	5306	70	**497**	1200
				7850	3750	4800		heaviest	3041	5326	70	**487**	1200
	4x4 Crew HPP	5.0L	156.8	7850	3750	4800	XL	lightest	3115	5199	70	**437**	1200
				7850	3750	4800		heaviest	3146	5382	70	**415**	1200
				7850	3750	4800	XLT	lightest	3152	5402	70	**410**	1200
				7850	3750	4800		heaviest	3166	5419	70	**400**	1200

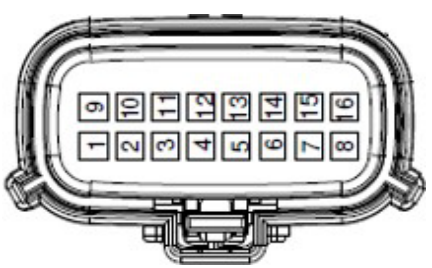
SNOWPLOW
F-150 MID-SERIES
LED HEADLAMPS

Right headlamp connector to snowplow jumper



CNUM: C1LF09-A8
Connector #: 4L3T–14A464–WA

Cavity	Circuit	Circuit Descrip on	Op on
1	CLF05	Low Beam RT	LED Headlamps
2	N/A	N/A	N/A
3	CLF62	DRL RT	LED Headlamps
4	N/A	N/A	N/A
5	N/A	N/A	N/A
6	VDN14	LIN	LED Headlamps
7	CBBA0	Side Select	LED Headlamps
8	CBBA0	PWR	LED Headlamps
9	N/A	N/A	N/A
10	GD131	GND	LED Headlamps
11	CLF94	RT High Beam	LED Headlamps
12	CLF92	RT Low Beam	LED Headlamps
13	CPD03SP	Snowplow Relay (B+ Power, 20 Amp)	LED Headlamps
14	CLF94	LF High Beam	LED Headlamps
15	CLF91	LF Low Beam	LED Headlamps
16	N/A	N/A	N/A



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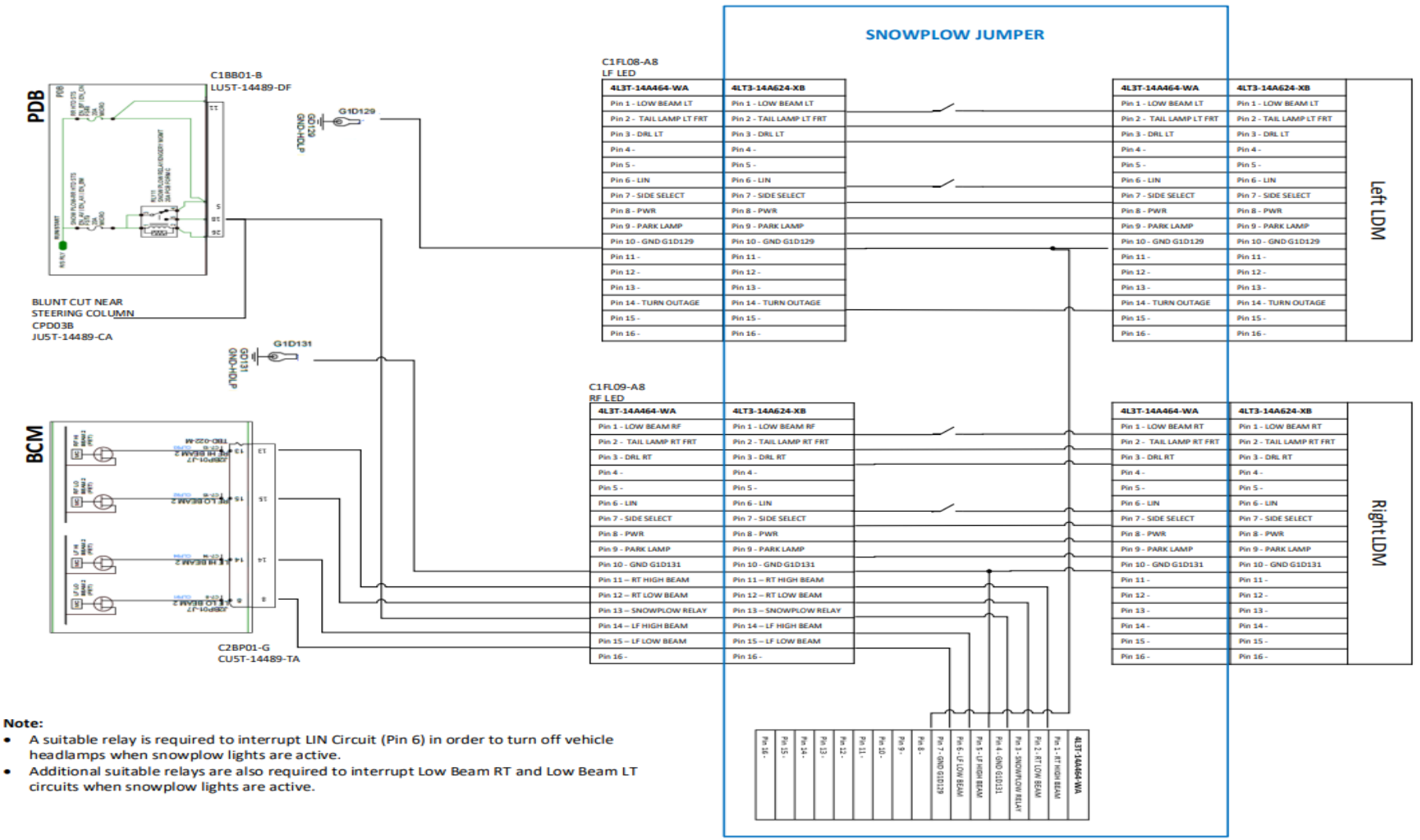
SNOWPLOW
F-150 MID-SERIES
LED HEADLAMPS



Note:

- A suitable relay is required to interrupt LIN Circuit (Pin 6) in order to turn off vehicle headlamps when snowplow lights are active.
- Additional suitable relays are also required to interrupt Low Beam RT and Low Beam LT circuits when snowplow lights are active.

SNOWPLOW
REQUIRED & RECOMMENDED EQUIPMENT
SUPER DUTY F-250/350/450/550

The Super Duty F Series vehicles tabled below are available for snowplow usage. Plow and attaching hardware weights listed in tables below.

Minimum Required Equipment

- 4x4 (all pickups, F350 chassis cab)
- Snowplow Prep Package (473) which includes: Computer Selected Springs for Snowplow Application
- Gas engine 750 –CCA 78 Amp hour SLI battery (standard snowplow prep)
- Diesel engine 750 –CCA 78 Amp hour dual battery
- 6.8L Gasoline: 195-amp alternator
- 7.3L Gasoline: 195-amp alternator
- 6.7L Diesel Pickup: 250-amp alternator
- 6.7L Diesel Chassis Cab: 352-amp dual alternators

Recommended Equipment

All terrain tires
Roof clearance lights (optional with SRW Pickup models, included on DRW Pickups and all Chassis Cabs).

- 6.8L Gasoline: Optional 250 amp (67E) and dual batteries (86M)
- 7.3L Gasoline: Optional 250 amp dual alternators (67B) and dual 68AH batteries (86M)
- 6.7L Diesel Pickup : Optional 407-amp dual alternators (67B)

Standard Equipment

Front and rear stabilizer bar (rear standard on Chassis Cab and DRW pickup models)
Roof clearance lights standard on Chassis Cab and DRW Pickups Steering damper
Engine oil cooler, automatic transmission oil cooler and maximum capacity engine coolant radiator are standard
All available axle ratios are acceptable

Completed Vehicle Weight

Snowplow weights (maximum recommended): Refer to the tables below.
The vehicle must not be operated when overloaded. A vehicle is overloaded when the weight of the completed vehicle with aftermarket equipment installed, plus driver, passengers and cargo, exceeds either the FGAWR, RGAWR or GVWR display ed on the Safety Compliance Certification Label.
The addition of ballast (up to a maximum of 1500lbs) weight placed rearward of the rear axle may be required to prevent exceeding the FGAWR, and provide good vehicle braking and handling. The ballast should be attached securely to the vehicle with consideration for the normal driving dynamics of snowplowing and occupant safety in accidents.

For Ford completed vehicles of 10,000 lb. GVWR or less, the weight of permanently attached aftermarket equipment must not exceed the Total Accessory Reserve Capacity (TARC) displayed on the Safety Compliance Certification Label to maintain the compliance representation that came with the Ford built vehicle. Exceeding TARC may require re certification. This applies only to the permanently attached equipment, such as the snowplow frame mounting hardware, and not to the removable portion of the snowplow blade assembly.

Front End Wheel Alignment and Headlight Aim

Front end wheel alignment (toe) and headlight aim may require readjustment after installation of snowplow equipment. Failure to reset front wheel alignment may cause premature uneven tire wear. If required, reset to chassis manufacturer's specifications found in the Ford Workshop Manual.

Electrical Connections

Installation of any inductive load devices, such as electric motors or electric clutches for clutch pumps, must not be connected to Ford vehicle wiring or f use panels. Power for such devices should be taken directly from the battery or starter motor relay power terminal. Control of these devices should be achieved via relays. No direct current path should exist between Ford vehicle wiring and the installed load that is not filtered by the battery. These recommendations are intended to eliminate or minimize any induced reverse voltage into the Ford circuitry. Refer to SVE Bulletin Q 277 "Under Hood Electrical Equipment Mounting" for clearance guidance.

Warranty

The Ford New Vehicle Limited Warranty applies to vehicles with snowplows installed in accordance with these guidelines. Consult your Ford dealer or the Owner's Guide for any further questions.

Pickup(1) Driver and one Passenger			Permanent Hardware / Max Removable Plow Weight (2)(4) 250 SRW 4X4 (3)	350 SRW 4X4 (3)	350 DRW 4X4 (3)	450 DRW 4X4 (3)
Regular Cab	141.6"	6.8L Gas	100/1300	100/1300	100/1300	/
		7.3L Gas	100/1300	100/1300	100/1300	/
		6.7 Diesel	100/1155	100/1185	100/1190	100/1005
		HO 6.7 Diesel	100/1190	100/1180	100/1180	100/965
Super Cab	148.0"	6.8L Gas	100/1300	100/1285	/	/
		7.3L Gas	100/1300	100/1285	/	/
		6.7 Diesel	100/1005	100/1080	/	/
		HO 6.7 Diesel	100/1090	100/1110	/	
	164.2"	6.8L Gas	100/1285	100/1300	100/1300	/
		7.3L Gas	100/1280	100/1300	100/1300	/
		6.7 Diesel	100/905	100/965	100/945	
		HO 6.7 Diesel	100/990	100/1000	100/990	/
Crew Cab	159.8"	6.8L Gas	100/1300	100/1300	/	/
		7.3L Gas	100/1300	100/1300	/	/
		6.7 Diesel	100/925	100/995	/	/
		HO 6.7 Diesel	100/1040	100/1010	/	
	176.0"	6.8L Gas	100/1300	100/1300	100/1300	/
		7.3L Gas	100/1300	100/1300	100/1300	/
		6.7 Diesel	100/755	100/815	100/815	100/675
		HO 6.7 Diesel	100/870	100/850	100/875	100/735

Chassis Cab Driver and One Pasenger			Permanent Hardware / Max Removable Plow Weight (2)(4) F350 SRW 4x4 (3)	F350 DRW 4x4 14,000 LB GVWR	F450 DRW 4x2	F450 DRW 4x4	F550 DRW 4x2	F550 DRW 4x4	F550+ DRW 4x2	F550+ DRW 4x4	F600 DRW 4x4
Regular Cab	145.0"	6.8L Gas	100/1350	100/1350	/	/	/	/	/	/	/
		7.3L Gas	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
		6.7 Diesel	100/1350	100/1200	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
	169.0"	6.8L Gas	/	100/1350	/	/	/	/	/	/	/
		7.3L Gas	/	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
		6.7 Diesel	/	100/1100	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
	193.0"	6.8L Gas	/	/	/	/	/	/	/	/	/
		7.3L Gas	/	/	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
		6.7 Diesel	/	/	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
	205.0"	6.8L Gas	/	/	/	/	/	/	/	/	/
		7.3L Gas	/	/	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
		6.7 Diesel	/	/	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
Super Cab	167.5"	6.8L Gas	100/1350	100/1350	/	/	/	/	/	/	/
		7.3L Gas	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
		6.7 Diesel	100/1075	100/1075	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
	191.5"	6.8L Gas	/	/	/	/	/	/	/	/	/
		7.3L Gas	/	/	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
		6.7 Diesel	/	/	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
Crew Cab	179.4"	6.8L Gas	100/1350	100/1350	/	/	/	/	/	/	/
		7.3L Gas	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
		6.7 Diesel	100/950	100/975	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
	203.4"	6.8L Gas	/	/	/	/	/	/	/	/	/
		7.3L Gas	/	/	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350
		6.7 Diesel	/	/	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350	100/1350

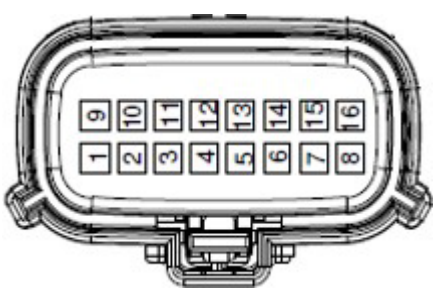
Model Not Available

(1) Includes Pickups ordered with Pickup Box Delete op on.
(2) 100/750 = 100 maximum lb. of permanently a ached hardware and maximum 750 lb. of removable plow blade and hardware. The plow and hardware weight limits shown are based upon a vehicle with 33% Ford Op on content and a total of 300 lb. for the driver and one front seat passenger (150 lb. each).
(3) Considering maximum GVWR offered (variable)
(4) This chart only shows the Maximum Recommended values.

SNOWPLOW
CIRCUIT PINOUTS
SUPER DUTY F-250/350/450/550/600

CNUM: C11-S1-PJ
Connector #: 6U5T-14A464-JA

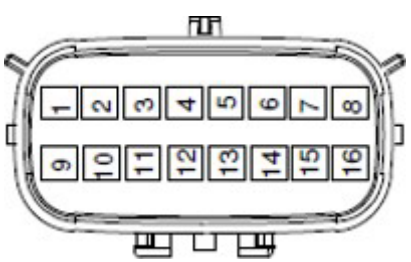
Cavity	Circuit	Circuit Description	Option
1	GD131J	Right Ground	N/A
2	CAT17		N/A
3	CLF05		N/A
4	CLF04		N/A
5	CLF04	Right Low Beam	N/A
6	CLF05	Left Low Beam	N/A
7	CLF03	Right High Beam	N/A
8	CLF002	Left High Beam	N/A
9	GD129J	Left Ground	N/A
10			N/A
11			N/A
12			N/A
13	CDP03	B+	N/A
14	CLS77	Park Lamps	N/A
15	CLS25	Right Front Turn Lamp	Halogen or LED Headlamps
16	CLS21	Left Front Turn Lamp	Halogen or LED Headlamps



4L3T–14A464–WA

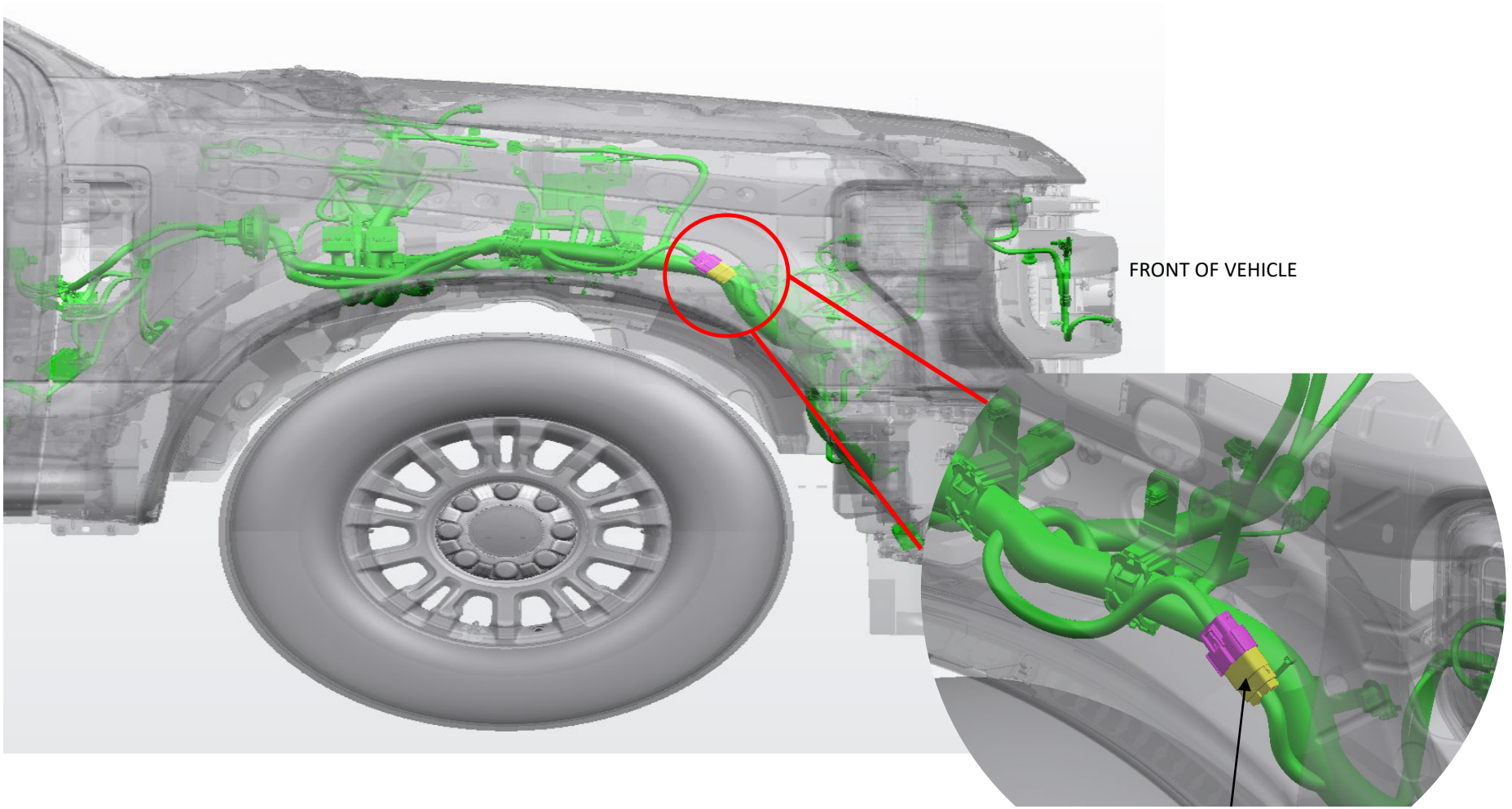
CNUM: C11-S2-PJ
Connector #: 4L3T–14A624

Cavity	Circuit	Circuit Description	Option
1	N/A	N/A	N/A
2	N/A	N/A	N/A
3	CLF05		N/A
4	CLF04		N/A
5	CLF04	Right Low Beam	Halogen or LED Headlamps
6	CLF05	Left Low Beam	Halogen or LED Headlamps
7	CLF03	RIght High Beam	N/A
8	CLF03	Left High Beam	N/A
9	CLF02		N/A
10	CLF02		N/A
11	N/A	N/A	N/A
12	N/A	N/A	N/A
13	N/A	N/A	N/A
14	N/A	N/A	N/A
15	N/A	N/A	N/A
16	N/A	N/A	N/A



4L3T–14A464–XB

SNOWPLOW
CONNECTOR LOCATION
SUPER DUTY F-250/350/450/550/600



Note: Connector location may be rotated 90 degrees or more inboard on harness bundle

COLD WEATHER BATTERY PERFORMANCE

- Cold weather slows down battery charge rate acceptance. Batteries can accept only 2 to 5 amp-hours of charge during cold ambient temperatures (20F or less).
- Cold-weather snowplow operations can reduce battery charge level significantly (on the order 5 to 20 amp-hours) during a typical plowing session.
- Deep-cycling of the batteries is especially detrimental to battery longevity.
- Cold weather increases viscosity of the hydraulic fluid, causing even larger electrical draw on the truck.
- Snowplow kits (plow hydraulics, lighting, salt-spreaders, etc.) use more energy than alternators can keep up with (during low-speed operations), resulting in batteries having depleted charge levels.
- Batteries in trucks that sit (unused) for long periods of time (~3-4 weeks) will experience lower states of charge due to normal parasitic electrical loads in the vehicle.
- Short-duration and/or low-speed plowing operations do not allow for battery charge level to be adequately replenished.
- Drive your truck (at speed) will not fully be able to replenish battery state of charge in cold temps (<20F).
- Weak batteries will result in slower movement of the plow, dimming lights and possible radio drop-outs and other functional issues.
- Other vocations or installed equipment, such as Lift-gates, winches, etc. may result in similar low-battery issues.

BEST-PRACTICES FOR BATTERY HEALTH

- Keep all battery connections light and clean. Loose or dirty connections require higher power consumption.
- Prior to the snow season, check to make sure your battery levels are at full state-of-charge. 12.7-12.8V with vehicle off is a healthy battery. Beginning the snowplow season with a depleted battery results in deep-cycle depletion of battery charge.
- Avoid parking (unused) your truck for long periods of time (~3-4 weeks) after plow operations as the battery will develop lower states of charge due to normal parasitic electrical loads in the vehicle.
- Parking the truck after snowplow operations, with battery in discharged state of charge, can lead to sulfation and/or stratification of the acid resulting in irreparable internal damage to the battery.
- Avoid operating the plow with engine not running.
- If you suspect your battery is in a state of discharge, hook a battery charger up when the truck is not in use. If the battery still cannot achieve or maintain adequate charge, the battery should be replaced.
- On a dual-battery truck, if one battery goes bad, always replace in pairs (same size, same capacity).